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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/584,033

05/01/2007

Jerry L. Holden

60158-286 PUS1

6905

26096 7590 12/07/2009  
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EXAMINER

YUSUF, MOHAMMAD I

ART UNIT

PAPER NUMBER

3725

MAIL DATE

DELIVERY MODE

12/07/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/584,033	<b>Applicant(s)</b> HOLDEN, JERRY L.	
	<b>Examiner</b> MOHAMMAD YUSUF	<b>Art Unit</b> 3725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 November 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 15-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>06/22/2006</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election without traverse of Group I, claims 1-14, in the reply filed on 10<sup>th</sup> November 2009 is acknowledged.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 5, 7, 9-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saier et al. (US 4,179,911).

In regard to **claim 1**,

Saier discloses a method of forming a tube comprising the steps of: positioning the tube [1'] in a first position; forming an indentation on the tube with a mold [rolling tool 7 forms indentation 2]; moving the tube to a second position relative to the mold [fig. 4 shows rotating the tube to a second position];

Saier does not disclose releasing of the mold from the tube explicitly. However it would have been obvious to one having ordinary skill in the art at the time the invention was made to release the mold [rotating tool 7] from the tube after molding is finished.

In regard to **claim 2**, Saier discloses that repeating the forming of indentation [fig. 3, multiple indentations 2].

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In regard to **claim 3**, Saier discloses that the moving occurs before the step of releasing [fig. 3, tube 1' keeps moving and multiple indentations 2 are created before the releasing occurs].

In regard to **claims 11 and 14**, Saier discloses that the mold is a plurality of rollers [8] and groove [2] is formed on the tube [figs. 3 and 12].

In regard to **claims 5, 7, 12-13**, Saier discloses rotating the tube [fig. 4, rotating tube 1'] and also translating tube relative to mold [fig. 3, tube 1' is translated in order to continue to create more indentations 2]; [also see fig. 12 and column 9 lines 36-38 and line 54].

In regard to **claim 9**, Saier discloses that the tube is rotated relative to the mold [fig. 4, tube 1'; and as it rotates, every 5-10 degrees, one of the steps in one of the molding rollers 8, 11, 13-16 is repeated].

In regard to **claim 10**, Saier discloses that the tube has end portion with is substantially circular cross-section.

4. Claims 4, 6, 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saier et al. (US 4,179,911) as applied to claim 1 and 5 above, and further in view of Beck (US 3,887,004).

In regard to **claims 4, 6, 8**, Saier does not disclose moving after releasing. However, Beck disclose [fig. 4 and column 3, lines 13-15] another finned tube where the fins are spaced longitudinally.

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Saier by releasing the tube from the mold and moving and then molding again in order to have better flow control [column 9, lines 1-15].

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MOHAMMAD YUSUF whose telephone number is (571) 270-7487. The examiner can normally be reached on Monday-Friday 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dana Ross can be reached on (571) 272-4480. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dana Ross/  
Supervisory Patent Examiner, Art Unit 3725

/MOHAMMAD YUSUF/  
Examiner, Art Unit 3725